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Docket No.: 0465-0711P
Reply to Office Action of June 20, 2008

REMARKS

The Examiner is thanked for the thorough examination of the application.

Status Of The Claims

Claims 1-3, 5-10, 23, 24, 26 and 28-30 are pending in the application.

Reconsideration of the Application, as amended, is respectfully requested.

Telephone Interview

Applicant acknowledges with appreciation the courtesies extended by Examiner Nguyen to Robert J. Webster, Reg. No. 46,472, Applicant's representative, during the telephone interview conducted on September 15, 2008. During that interview, agreement was reached concerning claim language that patentably defines over the applied art. Claims 1, 7 and 23 have been amended to include that language.

Rejections Under 35 USC §103

Claims 1-3, 5, 6, 23, 24, 26, 28 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo (U.S. Patent 6,295,109) in view of U.S. Patent 5,995,178 to Fujikawa et al. ("Fujikawa") and Faris (U.S. Patent 6,133,980).

Claims 7-10 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo in view of Fujikawa.

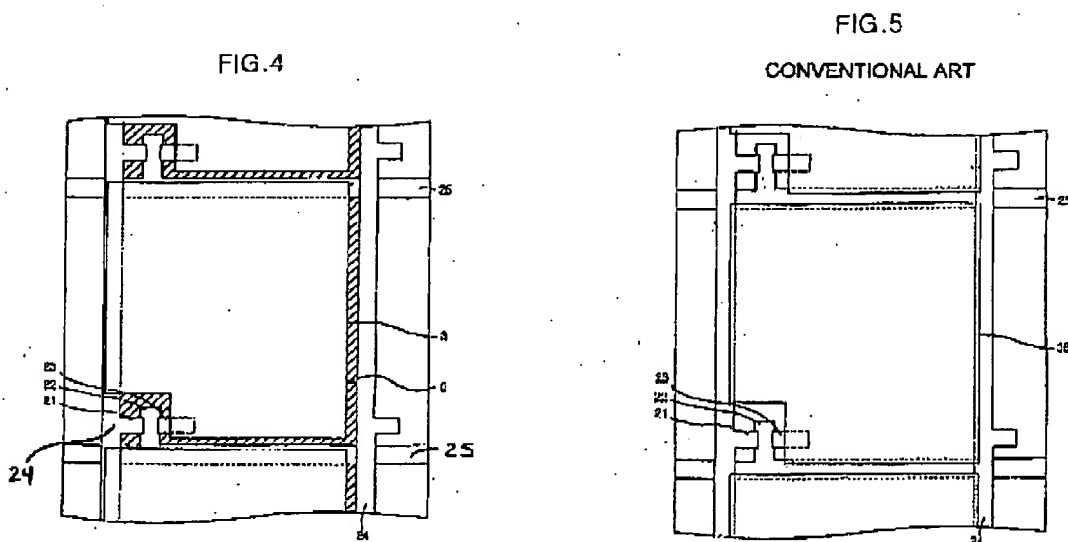
Applicant traverses all of the aforesaid rejections and respectfully requests reconsideration and withdrawal thereof.

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The present invention pertains to a transmission-reflective type liquid crystal display device that, as is typically set forth in the independent claims, includes a reflecting film functioning as a pixel electrode that substantially overlaps data and gate lines of the pixel. The advantages of the present invention over the conventional art can be better understood by comparing Figure 4 of the present invention to the conventional art depicted in Figure 5, below.



As explained at page 9, lines 20-24 of the specification, the reflecting film 36 overlaps with every *inner edge* of the gate line 25 and the data line in order to form storage capacitance in the conventional art of Figure 5. However, as is explained at page 10, lines 3-11 of the specification, the reflecting film 3 of the present invention overlaps the greater part of the gate line 25 and the data line 24 to form storage capacitance.

Kubo pertains to an LCD having pixels with reflective and transmissive regions. The Examiner points to Figures 2, 3, 21 and 22 of Kubo, which show polarizers 6, 9, quarter wave plates 7, 10, substrates 1, 2, transmissive electrode 4, reflective/transmissive electrode regions 3,

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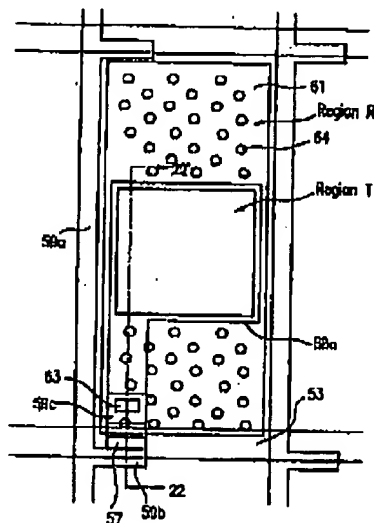
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8 and a liquid crystal layer 5.

At page 7, lines 1-9 of the Office Action (and at page 13, lines 1-7), the Examiner unequivocally admits to some of the failures of Kubo, including 1) the failure to disclose a light transmitting region between an inner edge of a gate line and a side of the outer edge periphery of the reflecting film in each pixel, such that the opposite side entirely overlaps an adjacent gate line; and 2) the failure to disclose a circular polarizer made of cholesteric liquid crystal polarizer including a right handed pitch, pitch values p of λ/n and a wavelength of 380 nm to 800 nm.

However, Kubo additionally fails to disclose or suggest a reflection film acting as a pixel electrode that overlaps more than half the width of a gate line and more than half the width of a data line in the pixel, such as is set forth in independent claims 1, 7 and 23 of the present invention. This failure of Kubo can be readily observed in Figure 21 of the patent, which is depicted below.

FIG. 21



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Applicant respectfully submits that the terminology, "more than half the width," is clear, and that Kubo's pixel electrode covers less than half of the adjacent gate lines and less than half of the adjacent data lines.

In an attempt to remedy the deficiencies of Kubo, the Office Action turns to Fujikawa, and relies on Fig. 15 (which is a figure showing an embodiment of Fujikawa's disclosed invention) and on col. 4, lines 4-6 (which refers to Fujikawa's Fig. 22A, which is disclosed as conventional to Fujikawa, and concerns a device which has a *POP structure* where each pixel electrode is insulated from the corresponding source and gate signal lines by the interlayer insulating film and the pixel electrode is connected to the drain electrode of the corresponding TFT via the contact hole formed through the interlayer insulating film in which the pixel electrode 505 covers less than the greater part, i.e., less than half, of an adjacent gate line, and less than the greater part, i.e., less than half, of adjacent data line. This fact is clearly evident from visual inspection of Fujikawa's Figs. 15 and 22.

Applicant strenuously disagrees with the Examiner's interpretation of Fujikawa which is based on one of Fujikawa's figures reproduced in the bottom half of page 5 of the outstanding Office Action and notes that no basis in that figure of Fujikawa for the conclusion that the first opposing side of the reflecting film is overlapping with more than half the width of an adjacent line, or that the second opposing side of the reflecting film is overlapping the greater part of an adjacent data line. These conclusory statements are not found in Fujikawa explicitly or inherently (i.e., necessarily).

So, even if one of ordinary skill in the art were properly motivated to modify Kubo in view of Fujikawa, the resulting modified version of Kubo would not result in, or otherwise

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render obvious, the claimed invention.

Furthermore, because both Kubo and Fujikawa disclose a reflective type device, there is no proper basis found in these references to modify the Kubo-Fujikawa reference combination to arrive at the claimed transmissive-reflective device. In fact, to arrive at such a modification of both of these allegedly reflective devices, one would have to substantially modify Kubo and Fujikawa to remove the overlapping features of those references' pixel electrodes and data, gate or source lines to provide such a feature, and there is no basis found in this rejection of any incentive for one of ordinary skill in the art to dispose of the fundamental aperture ratio improvement features of these two references to arrive at the claimed invention. In fact, the proposed combination of these two references would render the combination inoperative as a transmissive-reflective device. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant. See *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550-51, 220 USPQ 303, 311 (Fed. Cir. 1983) (the totality of a reference's teachings must be considered), cert. denied, 469 U.S. 851 (1984); *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969) (references taken in combination teach away since they would produce a "seemingly inoperative device"); *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (CCPA 1963) (reference teaches away if it

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leaves the impression that the product would not have the property sought by the applicant). See *In re Gurley*, 31 USPQ2d 1130 (Fed. Cir. 1994).

The Examiner also turns to the teachings of Faris for teachings pertaining to pitch values p of λ/n and for wavelength $\lambda = 400 \text{ nm} - 800 \text{ nm}$.

Applicant respectfully submits that even of one of ordinary skill in the art were properly motivated to use the claimed pitch values and wavelengths based on Faris, the so modified version of Kubo-Fujikawa would still not render the claimed invention obvious, because of the aforementioned shortcomings of Kubo and Fujikawa.

Furthermore, as noted above, independent claims 1, 7 and 23 have been amended to include language, agreed to by the Examiner, that clearly defines over the applied art.

Accordingly, the Office Action fails to make out a *prima facie* case of the invention recited in these pending claims.

Reconsideration and withdrawal of this rejection of claims 1-3, 5-10, 23, 24, 26 and 28-30 are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

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If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to Mr. Webster at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: September 22, 2008

Respectfully submitted,

By 

Esther H. Chong

Registration No.: 40,953

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatchouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant

David A. Blodeau
Registration No. 43.325

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